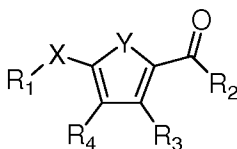


### AMENDMENTS TO THE CLAIMS

Applicant has submitted a new complete claim set. This listing of claims will replace all prior versions and listings of claims in the application:

1-23. (Canceled)

24. (Currently Amended) A method of modulating an immune response in a subject, comprising:  
administering to a subject in need of such immune modulation an amount of a compound effective to enhance the subject's immune response to an antigen, wherein the compound is of the formula:



wherein,

R<sub>1</sub> is ~~alkyl, aryl, or heterocyclyl~~ cycloalkyl;

R<sub>2</sub> is H, OH, alkyl, ~~aryl, heterocyclyl~~, OR<sub>3</sub>, or N(R<sub>3</sub>)<sub>2</sub>;

R<sub>3</sub> is ~~H, alkyl, aryl, or heterocyclyl~~ phenyl, optionally substituted phenyl;

R<sub>4</sub> is H, CN, halogen, CF<sub>3</sub>, CO<sub>2</sub>R<sub>3</sub>, or C(O)N(R<sub>3</sub>)<sub>2</sub>;

X is S, SO<sub>2</sub>, O, or NR<sub>3</sub>; and

Y is S, O, or NR<sub>3</sub>.

25-28. (Canceled)

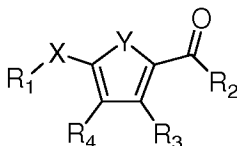
29. (Previously presented) The method of claim 24 wherein the subject is a subject having or at risk of having a cancer expressing a cancer antigen.

30-44. (Canceled)

45. (Previously presented) The method of claim 24 wherein the subject is a subject having or at risk of having an infectious disease.

46-67. (Canceled)

68. (Currently amended) A method of enhancing MHC Class II catalyzed peptide exchange comprising contacting a cell bearing a MHC Class II molecule with a compound in the presence of a peptide that binds MHC class II, wherein the compound is of the formula:



wherein,

R<sub>1</sub> is ~~alkyl, aryl, or heterocyclyl~~ cycloalkyl;

R<sub>2</sub> is H, OH, alkyl, ~~aryl, heterocyclyl~~, OR<sub>3</sub>, or N(R<sub>3</sub>)<sub>2</sub>;

R<sub>3</sub> is ~~H, alkyl, aryl, or heterocyclyl~~ phenyl, optionally substituted phenyl;

R<sub>4</sub> is H, CN, halogen, CF<sub>3</sub>, CO<sub>2</sub>R<sub>3</sub>, or C(O)N(R<sub>3</sub>)<sub>2</sub>;

X is S, SO<sub>2</sub>, O, or NR<sub>3</sub>; and

Y is S, O, or NR<sub>3</sub>.

69-113. (Canceled)

114. (Currently amended) The method of claim 24, wherein

R<sub>1</sub> is ~~alkyl, aryl, or heterocyclyl~~ cycloalkyl;

R<sub>2</sub> is H, OH, ~~aryl, heterocyclyl~~, OR<sub>3</sub>, or N(R<sub>3</sub>)<sub>2</sub>;

R<sub>3</sub> is ~~aryl or heterocyclyl~~ phenyl, optionally substituted phenyl;

R<sub>4</sub> is H, CN, halogen, CF<sub>3</sub>, or C(O)N(R<sub>3</sub>)<sub>2</sub>;

X is S, SO<sub>2</sub>, or O; and

Y is S or O.

115. (Currently amended) The method of claim 24, wherein

R<sub>1</sub> is ~~alkyl, aryl, or heterocyclyl~~ cycloalkyl;

R<sub>2</sub> is H, OH, OR<sub>3</sub>, or N(R<sub>3</sub>)<sub>2</sub>;

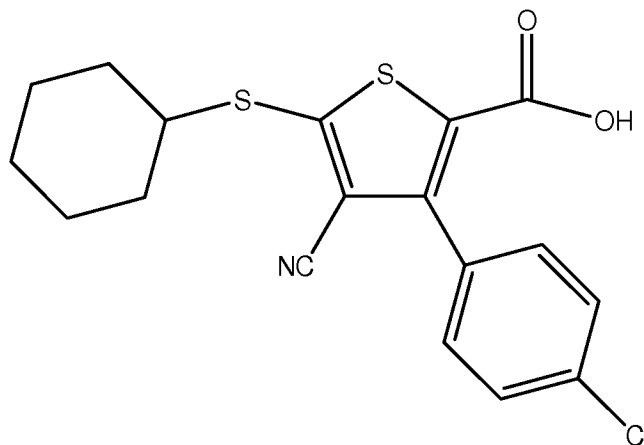
R<sub>3</sub> is ~~aryl or heterocyclyl~~ phenyl, optionally substituted phenyl;

R<sub>4</sub> is H, CN, F, Cl, Br, or CF<sub>3</sub>;

X is S; and

Y is S.

116. (Previously presented) The method of claim 24, wherein the compound is represented by the formula:



117. (Previously presented) The method of claim 24, further comprising administering an antigen to the subject.

118. (Previously presented) The method of claim 117, wherein the antigen is a cancer antigen.

119. (Previously presented) The method of claim 117, wherein the antigen is a viral antigen, a bacterial antigen, a fungal antigen or a parasitic antigen.

120. (Currently amended) The method of claim 68, wherein

R<sub>1</sub> is ~~alkyl, aryl, or heterocyclyl~~ cycloalkyl;

R<sub>2</sub> is H, OH, ~~aryl, heterocyclyl~~, OR<sub>3</sub>, or N(R<sub>3</sub>)<sub>2</sub>;

R<sub>3</sub> is ~~aryl or heterocyclyl~~ phenyl, optionally substituted phenyl;

R<sub>4</sub> is H, CN, halogen, CF<sub>3</sub>, or C(O)N(R<sub>3</sub>)<sub>2</sub>;

X is S, SO<sub>2</sub>, or O; and

Y is S or O.

121. (Currently amended) The method of claim 68, wherein

$R_1$  is ~~alkyl, aryl, or heterocycyl~~ cycloalkyl;

$R_2$  is H, OH,  $OR_3$ , or  $N(R_3)_2$ ;

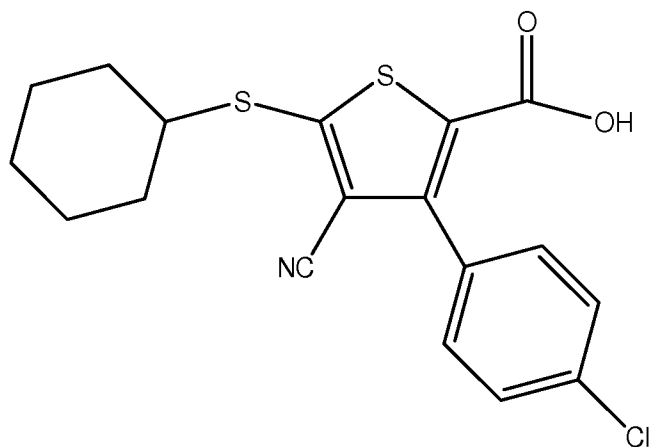
$R_3$  is ~~aryl or heterocycyl~~ phenyl, optionally substituted phenyl;

$R_4$  is H, CN, F, Cl, Br, or  $CF_3$ ;

X is S; and

Y is S.

122. (Previously presented) The method of claim 68, wherein the compound is represented by the formula:



123. (Currently amended) The method of claim 68, further comprising ~~administering~~ contacting the cell with an antigen ~~to the subject~~.

124. (Previously presented) The method of claim 123, wherein the antigen is a cancer antigen.

125. (Previously presented) The method of claim 123, wherein the antigen is a viral antigen, a bacterial antigen, a fungal antigen or a parasitic antigen.